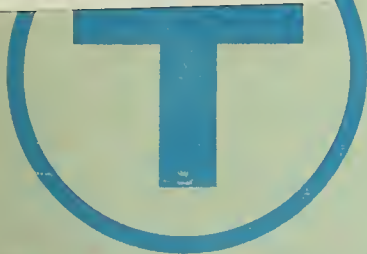




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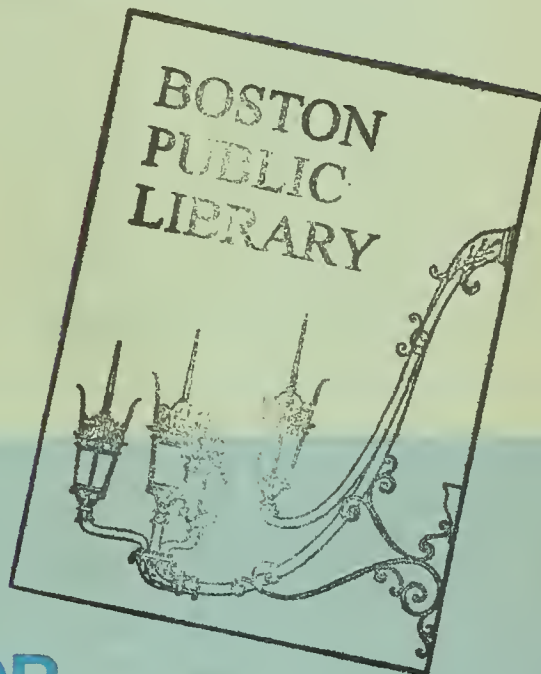
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REVISED PROGRAM FOR MASS TRANSPORTATION January, 1969

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MASS TRANSPORTATION

January 1969

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SUMMARY

The capital projects contained in this second revision to the Program for Mass Transportation are essentially those contained in the Program as approved in 1966 and amended in 1968.

Project	Estimated Cost in Millions	
	August 1966	January 1969
Haymarket-North	\$ 75.9	\$166.5
Southwest Corridor	65.6	201.9
Harvard-Alewife	59.8	157.3
South Shore	73.0	111.6
Somerville (1)	9.0	-
Mattapan (2)	-	14.5
Station Modernization	15.1	60.2
Vehicle Support Facilities	4.0	22.5
Revenue Equipment	26.2	63.7
Improvements to Existing Plant	12.6	26.2
Suburban Commuter Program	5.0	23.6
Central Area Systems Study	-	2.0
Acquisition of Private Carrier Assets	-	11.7
Construction Administration	-	17.2
Non-Revenue Equipment and Office Furniture and Equipment	-	3.4
Sub-Total	\$346.2	\$882.3
Reserve Projected Inflation, 1970-1975, at 6% Annually	22.8	116.4
Total	\$369.0	\$998.7

(1) *Deferred pending feasibility study of Orange Line extension to West Medford.*

(2) *Included by the 1968 revision.*



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THE MASTER PLANNING PROCESS

Introduction

In 1966, the Authority presented to the public its initial Program for Mass Transportation. The Program consisted of two major elements:

Action Projects

The report proposed a series of transit development projects designed to make major improvements and extensions in the cities and towns which the Authority serves.

Continuing Studies

These studies reported on a continuing effort aimed at developing additional action programs for other major improvements required.

The 1966 report was the first product of the Master Planning Program which the Authority's Board of Directors had initiated almost immediately after the creation of the Authority. The Master Planning Program was evidence of the Authority's concern to provide continuing improvements in the public transportation services which are so essential to the sound growth and development of the economy and life of the greater Boston metropolitan area.

The establishment of the Master Planning Program, as a *continuous* process and a *permanent* part of the Authority's organizational responsibilities, was a new departure in the long history of the Authority and its predecessor transit organizations.

In the past, various programs had been proposed for making major improvements in mass transportation services. Sometimes, these proposals were formulated by the transit operating agency. More frequently, the initiative for formulating major new improvements had come from governmental agencies and ad hoc public groups like the 1945 Metropolitan Transit Recess Commission.

In almost all instances, however, the formulation of the improvement program was a one-time affair. Once the program had been proposed, formal planning activities ceased and the planning group dissolved or the transit organization returned to its day-to-day operating concerns.

Master Planning - A Continuing Responsibility

The events leading up to the preparation of the 1966 Program for Mass Transportation signaled a basic change in this pattern of events. By creating a permanent Master Planning function, the Authority's Board of Directors recognized that the continuing changes in the region the Authority serves, and the pace at which these changes are occurring, requires that planning must be more than an occasional or intermittent concern. It also recognized that the Authority itself could not be a passive agent in the complex task of trying to define the specialized role which public transportation must play in the changing environment of the Boston region.

The 1966 Program, therefore, signaled the Authority's recognition that the Authority as an organization must exercise initiative of two types:

The Authority must participate in larger attempts, such as those of the Eastern Massachusetts Regional Planning Project and the Metropolitan Area Planning Council, to make orderly provision for the developing needs of the metropolitan region. This participation must be more than superficial bureaucratic "coordination" or passive response to the initiatives of other agencies in the process. In part at least, the Authority is required to take the initiative to propose how both through its existing services and through new ones, can play a positive and unique part in shaping the growth of the region and the communities it serves.

The Authority also has primary production concerns because it is an operating agency which must produce important transportation services. In its role as producer of transportation services, it must take primary responsibility for expanding and reshaping its own operations in ways which will fulfill its statutory obligation to provide modern economical services.

Therefore, Master Planning at the Authority is not a matter of academic speculation about what the future will or should look like. The planning function is directly concerned with answering the constantly reoccurring questions of priorities and of selection among the alternatives available for the expansion and change in operations and service provided.

The Scope of the Planning Program

Because a formal and continuing concern with Master Planning is a relatively recent function both at the Authority and in many corporate organizations and public agencies, it may be useful to report on what it is in terms of the scope of the issues with which Authority Master Planning is concerned.

As a staff function reporting to the Authority's Board of Directors, the Master Planning Program is *primarily* concerned with the following major policy questions:

How to make major new improvements to existing transportation services.

How to provide major new transportation services; and

What priorities should be assigned when several desirable programs compete for scarce resources.

The focus of the Master Planning Program, therefore, is action-oriented. It is charged with:

Identifying opportunities for making major improvements in transportation services;

Investigating alternative methods by which to make these improvements;

Assembling the information necessary to assess the comparative results and costs of these alternatives; and

Preparing detailed action programs for implementing a proposed improvement once the Board has judged it to be feasible and desirable.

In other words, the final output of the Master Planning process is action programs of the type which were presented in the 1966 Program for Mass Transportation and subsequently approved by the Authority's Advisory Board.

In addition to this function, identifying and programming new action programs, the Master Planning Program also has a second important responsibility.

It is concerned with monitoring the implementation of approved action programs so that it can assist the Board of Directors to revise and update these programs in the light of changing circumstances. Since 1966, therefore, the Master Planning Program has been continuously concerned with reevaluating the scope, costs, projected results, and time schedules of the action projects in the 1966 Program which the Authority was authorized to implement.

The Contents of the Master Plan

The Authority's Master Plan does not consist solely of the bound volumes published in 1966 under the titles, *A Program for Mass Transportation*, and *The Staff Supplement to a Program for Mass Transportation*, or its 1968 revision, or this report.

In fact, the Authority's Master Plan is not a bound volume at all if this suggests that its contents are fixed on any sort of once-and-for-all basis. It is *not* a static blueprint of the type used by contractors. Nor is it a vague description of some desired future end-state which is quickly made obsolete by events and only gathers dust on a shelf. The Master Plan might better be compared to a loose-leaf notebook in which new pages are from time-to-time inserted and old ones replaced with new and better information.

In this sense the Master Plan is a system for reporting four types of information. It is a mechanism for:

- Reporting on the status and prospects of approved action programs;

- Describing new action programs and revisions made to existing ones;

- Identifying the resources required to continue the execution of approved programs or to initiate action on new ones; and

- Reporting on the direction and results of the continuing study and research required to formulate new action programs or make basic changes to existing action programs.

The Master Planning Program is a continuing process for collecting and evaluating this information. It is the array of this information at any one point in time. The purpose of this system is to provide the information which is required for policy action and decision-making; that is, the information needed in order to decide what shall be done, what shall be done next, and how it shall be done.

The 1969 Revision to the Program for Mass Transportation

This current revision of the Program for Mass Transportation is an example of the dynamic nature of the planning process. It is a result of the need to continue to revise and adjust plans in the light of changing circumstances.

This revision is being issued at this time because:

- The Authority has learned much from more than two years of actual experience, actual experience in undertaking a large scale development program. This experience has demonstrated the need for some redefinition of projects and for a more adequate provision for the continuing rapid escalation of construction costs.

The communities affected and other public agencies involved with the Authority have benefited from actually working together on common problems. As a result, the Authority is now better prepared to estimate the many costs involved which are peripheral to actual transit operations, but are essential to sound community development and can most efficiently be provided in conjunction with transit project construction.

The scheduling of the complex interagency improvement projects are subject to constant adjustment. The Authority's Program must be periodically revised to acknowledge these adjustments.

The Interagency Planning Process

The Eastern Massachusetts Regional Planning Project, a joint undertaking of the Massachusetts Department of Public Works, the Massachusetts Department of Commerce and Development, the Metropolitan Area Planning Council, and this Authority, has been the vehicle by which the sponsoring agencies have developed a regional development and planning process which relates comprehensive transit needs to those of highways and, in turn, relates both to total regional growth trends and potential.

Since the issuance of the 1966 Program, the EMRPP has produced two basic documents, *Guides for Progress: Development Opportunities for Metropolitan Boston*, prepared by the Metropolitan Area Planning Council, and a *Recommended Highway and Transit Plan* prepared by the Massachusetts Department of Public Works in collaboration with the Authority.

The 1966 transit plans were based on 1963 traffic data developed by the Eastern Massachusetts Regional Planning Project. Preliminary 1990 traffic forecasts have since become available from the EMRPP for the analysis resulting in this revision. The transportation network contained in the *Recommended Highway and Transit Plan* is now being subjected to rigorous analysis by the Massachusetts Department of Public Works, and revised 1990 forecasts of transit travel resulting from this analysis will become available soon.

The proposals contained in this report are subject to further review and analysis when the Department of Public Work's network analysis has been completed.

Cost and Revenue Estimates

The 1966 estimates for operating revenue and operating costs are based upon the initial traffic estimates and preliminary operating schedules. Since the traffic forecasts used for this report are also of a preliminary nature, a reworking of the operation costs and revenues will be undertaken upon receipt of the above described traffic data, consistent with the continuing nature of the planning process.

This current revision of the 1966 Program addresses itself primarily to an updating of capital costs. The capital cost estimates and location studies contained in this report represent, for most projects, the results of up to two years of detailed engineering studies made by the Authority's independent consulting engineering firms in collaboration with the Authority's staff. The capital cost estimates of the rapid transit extension projects are now based on, for the most part, detailed, preliminary engineering plans, and some are based upon completed construction plans and specifications. And, learning from the experience of the past two years, the inflation factor used in these cost estimates is now 6% per year.

Conclusions

In summary, the Authority's Master Planning Program is a dynamic action process which addresses itself to the continuing reassessment of projects in being as well as the development of new projects essential to the provision of adequate mass transportation services to a growing and changing metropolitan area. This dynamic process results in, from time-to-time, the issuance of a revision in the Authority's overall guide to its continually changing and adjusting development program, its Program for Mass Transportation.

THE STATUS OF AND PROPOSED CHANGES IN APPROVED RAPID TRANSIT EXTENSION PROJECTS

Summary

The principal elements of the 1966 Program for Mass Transportation consisted of proposals to build five extensions to the rapid transit system. Extension of the basic rail rapid transit system is also the major element of this revision.

All rapid transit extension projects approved earlier by the Advisory Board remain in the revised program:

The terminal of the Haymarket-North Extension remains at Oak Grove. Flexibility to accommodate three alternative means for providing express service for riders from north of Oak Grove has been maintained in the project.

The Southwest Corridor project has been substantially increased in scope to provide for rapid transit service to Route 128 in both Needham and Canton by 1975.

The Harvard-Alewife project is undergoing complete redesign in collaboration with the City of Cambridge to enable the twin objectives of improved transit service and community development to be achieved in harmony.

The South Shore project has been required to absorb substantially more costs for upgrading the existing Red Line than was expected to be necessary in 1966. The terminal of the project currently under construction will be South Braintree.

The proposal for serving the Somerville Corridor with rail rapid transit advanced in 1966 has been deferred until the feasibility of extending a branch of the Orange Line to West Medford can be determined.

The Mattapan project remains in the Program as approved in 1968.

Haymarket-North

The Haymarket-North Extension remains a proposal to replace the Charlestown-Everett elevated structure by an extension from Haymarket Square under the Charles River along the Boston and Maine Reading Line to a terminal at Oak Grove, Malden, near the Melrose town line.

A three track line throughout the length of the line from the northerly portal of the Charles River tunnel to Oak Grove is now under design to permit either the possible continuation of parallel railroad service from Reading to North Station or the use of the third track for express electrified rapid transit service from Oak Grove. These options are being evaluated in comparison with the base option of constructing a two track system initially.

The capital cost of this project, including 50 new air-conditioned cars, the modernization of the existing Orange Line fleet, and the acquisition of the Boston and Maine Railroad Reading Line right-of-way from the North Station yards to Wilmington Junction, is now estimated to cost, in 1969 dollars . . . \$166,500,000.

Southwest Corridor

In the 1966 Program, the Southwest Corridor Project consisted of the relocation of the Orange Line from the Washington Street elevated onto the right-of-way of what is now the New Haven Main Line of the Penn Central Railroad from the Back Bay to Forest Hills, and its extension along what is now the Needham Branch of the Penn Central Railroad as far as the VFW Parkway in West Roxbury. The transit line would be in the median of Interstate 95 between Jackson Square, Roxbury, and Forest Hills. The approved project also provided for the preparation of the median of Interstate 95 for possible future transit construction southerly from Forest Hills to Readville.

The Eastern Massachusetts Regional Planning Project has urged, in its *Recommended Highway and Transit Plan*, that the Orange Line be extended to Route 128 in Needham and to Route 128 in the Canton-Norwood area before 1975 to help relieve the projected traffic congestion in that rapidly growing sector of the region.

This recommendation has been followed and the project as now proposed includes extensions to terminals at the intersection of the Penn Central Needham Branch and Route 128 and in the vicinity of the Route 128 Railroad Station on the Penn Central's New Haven Main Line.

The capital cost of this project, including 100 new air-conditioned cars and all required land acquisition, is now estimated, in 1969 dollars, at . . . \$201,900,000.

Harvard-Alewife

The project remains as approved in 1966, a proposal to extend the Cambridge-Dorchester Red Line from Harvard Square to a new terminal located in the vicinity of Alewife Brook Parkway near the intersection of the municipal boundaries of Cambridge, Belmont, and Arlington.

In principle, the project has met with almost universal approval and is considered to be a high priority project. However, events have occurred which resulted in delaying final design and actual construction. As proposed by the Authority, the route would be in a cut-and-cover tunnel under Massachusetts Avenue from Harvard Square to

Porter Square and then on the surface along the Boston and Maine Fitchburg Division right-of-way to Alewife Brook. The City of Cambridge has requested a postponement of further design and construction pending consideration of some alternatives in alignment, grade and method of construction.

The Authority and the City of Cambridge have agreed to enter into a cooperative agreement to resolve differences in a mutually satisfactory manner.

The cost of the project cannot be accurately estimated until one of the options now open has been selected. The costs of the various options range upward to more than \$200,000,000. For purposes of funding the project in this revised Program, it is believed that a satisfactory compromise solution can be agreed upon which would cost the Authority no more than, in 1969 dollars \$157,300,000.

South Shore

The project as approved in 1966 was to be a branch extension of the Cambridge-Dorchester Red Line service from the southerly subway portal in the vicinity of Boston Street, Dorchester, to a new terminal located near the junction of Route 18 and the Southeast Expressway in South Weymouth.

The project now under construction will terminate at South Braintree, with construction to South Weymouth deferred. The project as revised now includes more extensive signal, power and communication improvements in the Cambridge/Dorchester subway and on the Ashmont Branch of the Red Line than was expected to be necessary when the project was approved in 1966. The project also includes the funding of a new central communication center at Dewey Square although the facility will actually serve the entire rapid transit system.

Including these improvements in the existing Red Line and the construction of the Dewey Square communications center, the cost of this project is now estimated, in 1969 dollars, at \$111,600,000.

Somerville-West Medford

The project as approved in 1966 consisted of an extension of Green Line streetcar service from near the present Lechmere terminal of the line to Washington Street in Somerville.

In the first half of 1967, an engineering feasibility study of the approved Somerville Extension was conducted. Feasibility of the project was contingent upon institution of a suburban commuter railroad shuttle to a terminal at Washington Street, Somerville as proposed in 1966. Since this shuttle service proposal has not met with either public or official acceptance, plans for the extension were not pursued.

The traffic forecasts available for the 1966 Master Plan indicated that further

extension from Washington Street to West Medford or Winchester could not be justified at that time. The Eastern Massachusetts Regional Planning Project has since tested two plans for extending rail rapid transit beyond Lechmere further into the Somerville-Winchester Corridor, one consisting of the Green Line extension to Washington, and the other an extension of the Blue Line rapid transit via Bowdoin Square and Staniford Street to Ball Square, Somerville. Neither plan generated a sufficient increase in transit riding to justify construction.

A proposal to serve the Somerville Corridor by constructing a branch of the Orange Line along the New Hampshire Division of the Boston and Maine Railroad as far as West Medford has now been advanced. This proposal is worthy of further detailed engineering analysis.

This current revision to the Program for Mass Transportation therefore proposes deferment of the approved Somerville extension project until completion of the feasibility study of an Orange Line Branch through Somerville to West Medford.

Mattapan

The Mattapan plan as approved by the Advisory Board in February, 1968, provides for the extension of the present Cambridge/Dorchester rapid transit line from its present terminal at Ashmont to a new terminal at Mattapan. The trolley service would be replaced with rapid transit and the need for a passenger transfer at Ashmont would be eliminated.

The present streetcar storage and repair facility at Mattapan would be replaced by one in which the inspection, maintenance, repair, and storage of rapid transit cars could take place. This Mattapan facility would provide technical support for the entire Red Line until the proposed Alewife Brook yards and shops are opened. Once the Alewife Brook facility is in operation, the existing Codman Yard near Ashmont would be phased out and Mattapan would revert to a lesser role of providing facilities for scheduled inspections, emergency repairs, and storage of some cars.

Actually, the Mattapan site was not the Authority's choice for the relocation of the Bennett-Eliot maintenance shops and storage yards. Earlier studies indicated that Codman Yard was most favorable from an operating cost point of view. When considering overall operating efficiency then certainly the original site, Bennett-Eliot, is most favorable. In order for the Authority to continue its maintenance and car storage functions at the Bennett-Eliot location, the Kennedy Library would have to be constructed in the air rights over the yards. Since the Authority's initial plans for relocating the Red Line shops have not been supported by either the communities or authorities concerned, it had no choice at that time, but to select the Mattapan site. However, the entire matter is now under restudy. As part of this reevaluation, the feasibility of utilizing the Penn Central's New Haven Division yard south of South Station will be reexamined.

The capital cost of the Mattapan project is estimated, in 1969 dollars, at \$14,500,000.

THE STATUS OF AND PROPOSED CHANGES IN OTHER APPROVED CAPITAL PROJECTS

Summary

In its emphasis on rapid transit extensions, the 1966 Program tended to overlook the critical need in other elements of the total regional mass transportation system.

In matters relating to modernizing or replacing existing stations, vehicle support facilities, rolling stock, fare collection equipment, signals and communications, power generation and distribution, and other existing equipment and facilities, the expenditure of \$57,900,000. was proposed.

The revised program emphasizes the need to accelerate the renovating of these facilities immediately. Accordingly, it is now proposed to expend a total of \$176,000,000. for these purposes.

Station Modernization

The 1966 approved program for station modernization consisted of two phases: an initial \$9.1 million federally aided program and an additional allocation of \$6 million. Major work was planned at 18 stations and 22 were classified for minor upgrading. Major modernization and improvements included new fare collection equipment, public address and television surveillance, rest rooms and complete refurbishment of all station interiors.

Since the design of the first pilot station (Arlington Street) was started in the Spring of 1965, the Arlington, Airport, Bowdoin, Aquarium, Government Center Blue Line and Government Center Green Line stations have been completely modernized. The Maverick, Orient Heights, Fields Corner, Columbia, Copley, Prudential, and Haymarket Green Line stations are now in the construction stage.

It is now proposed that all 25 stations which will remain permanently in the system be given major modernization treatment. On the Red and Orange Lines this will include lengthening the platforms to permit the operation of six-car trains.

On the basis of experience gained to date in station modernization work, the total cost of completing the modernization of all stations in the system, in 1969 dollars, and including some extensive work required at the downtown State and Washington stations is estimated at \$60,200,000.

Program for Vehicle Support Facilities

The 1966 Program indicated the need for four new consolidated bus garages, but included a proposal for funding only the first two. This revision contains a total facilities configuration plan which spells out in depth the scope of modernization expansion and development required through 1975.

In developing the plan, emphasis is placed on vehicle support facilities for both buses and surface cars. Rapid transit facilities are discussed within the individual projects. The program also outlines the Authority's plans for modernizing its plant maintenance facilities.

The following paragraphs highlight the major items of the support facilities program. Because of the dependency on supporting studies not yet concluded, the "Facilities Plan" will require continual adjustment.

A primary objective in carrying out the program will be to phase out as quickly as consolidation and replacement will allow the following facilities:

Somerville Garage, Arlington Heights Yard, Eagle Street Garage, Bennett Street Trackless Trolley Facility, Fellsway, and Bartlett Street Garages.

It is proposed that these facilities be completely abandoned over the next five years.

Replacements will be provided by the consolidation of bus storage and servicing into four new facilities to be strategically located either in the major transit corridors or in the central area.

New facilities will be constructed on the Authority's property at Charlestown (300 buses), Albany Street (200 buses), Arborway (300 buses), and at the Alewife Brook Transit Complex (300 buses).

The facilities program also contains plans for construction of a new surface rail car shop at Riverside and extensive modernization of the facility at Reservoir.

To be undertaken as part of the proposed North Central Garage at Charlestown is a program for modernization of the plant maintenance facilities at that location. Removal of some structures over 100 years old will allow for construction of the new bus garage and maintenance facilities.

As a separate study, the feasibility of centralizing the rapid transit maintenance function at a single site will again be reviewed. As part of this review, the feasibility of utilizing the Penn Central's New Haven Division yard, located to the south of South Station, will be reexamined.

In total, the vehicle support facility program is estimated to be, in 1969 dollars, - \$22,500,000.

Revenue Equipment Replacement Program

It is proposed to retire each unit in the bus fleet at the end of twelve years of use. This requires the purchase of 100 new buses per year. This program also proposes the replacement of the remaining obsolete portions of the rapid transit and streetcar fleets with modern vehicles.

The proposals included in the 1966 Approved Program for replacing the Riverside streetcar equipment and the 48 cars on the Blue Line which were built in 1923 remain in this revised Program. Because of anticipated increases in riding resulting from the proposed reorganization of feeder bus lines, more vehicles will be required for those lines than was estimated in 1966.

Since plans still provide for converting the Riverside line to high platform rapid transit which would require high platform vehicles, the new low platform cars would be transferred at that time to other Green Lines, permitting the retirement of the inefficient streetcars.

In summary, the program calls for:

New buses (100 buses per year @ \$3,700,00 per year for seven years (1969 through 1975) and 300 buses already acquired	\$35,500,000.
130 new low platform rail cars, for use initially on the Riverside line	16,250,000.
36 new Blue Line cars, to replace 48 cars built in 1923	5,940,000
Equipment component replacements already expended and modernizing of 40 Blue Line cars	5,990,000
Total	\$63,680,000.

Program for Improvements to Other Equipment and Facilities

This project is intended to provide for numerous capital items, both as original equipment and for essential replacements, which will be required to maintain satisfactory and efficient operations. Many of the proposed items will result in a marked improvement in efficiency and lowering of operating costs.

The funding for some of the items is included in the various line extension projects, but they are mentioned here because they cut across all of those projects. They are discussed in more detail in the Staff Supplementary Report.

Following is a brief list of the proposed improvements:

Fare Collection:

Installation of an electronic fare collection system on all approved line extensions, plus existing stations on those lines. Funding is included in the estimates for the rapid transit extensions.

Existing Rights-of-way

Various improvements on lines not covered by the approved construction program are required. These include such items as widening projects on Commonwealth Avenue and Huntington Avenue, improved lighting, fencing, signing, cross drives, and passenger shelters, etc. Some funding is included in the CASS and Yards and Shops budgets.

Signals and Communications

Proposed improvements include:

Modern signals and other controls for the Blue Line to provide centralized supervision of train operation equal to those being provided as part of the Red and Orange Line extension projects, and equipment for new signal repair facility at the proposed Wellington shop. Similar improvements for the Green Line are under study by the CASS Project.

Two-way train-to-central headquarters radio communications equipment for the Blue Line, Green Line, and entire bus fleet not already equipped; centralized supervision system for bus fleet; police radio for use between headquarters and men; and facilities for central headquarters at new Dewey Square building.

Power Generation and Distribution

It is proposed that the present law which prohibits the Authority from disposing of its generating facilities be repealed and that the Authority purchase 60-cycle power from other utilities. This would permit the retirement of the Authority's obsolete and costly power generating facilities. Conversion would require the modernization of 13 existing substations to accept 60-cycle power.

In total, the cost of making the required improvements to other equipment and facilities is estimated, in 1969 dollars, at \$26,224,000.

As separate capital projects the following expenditures are also included in the Program as revised:

Non-Revenue Equipment

Acquisition of necessary equipment to handle expanded maintenance requirements, and to reduce costs, such as trucks, snow plows, compressors, wreckers, inspection cars, lifts, cranes, and special machinery - \$2,808,000.

Office Furniture and Office Equipment - \$556,000.

PROPOSED NEW CAPITAL PROJECTS

Suburban Commuter Service Program

The Authority was directed by Section 7 of Chapter 728 of the Acts of 1968 to prepare three alternative programs for continuing service to the areas now served by the Boston and Maine and Penn Central Railroads under the terms of their service contracts with the Authority.

These alternative programs have been prepared and submitted in a separate report to the Advisory Board as directed by the legislation.

The capital costs of the three alternatives, exclusive of land costs, as submitted to the Advisory Board are as follows:

Plan A: Railroad Suburban Commuter Program	\$9,461,922.
Plan B: Bus Suburban Commuter Program	\$6,283,700.
Plan C: Composite Suburban Commuter Program	\$18,588,662.

The cost of acquiring rights-of-way for these alternative programs is discussed in the following section.

For purposes of developing an adequate, comprehensive and integrated capital funding program, the capital costs which would be incurred if Plan C, the favored plan, were adopted are included herein, or \$18,600,000.

Acquisition of Railroad Rights-of-way

In February 1968 the Advisory Board issued a white paper which recommended that the Commonwealth of Massachusetts establish a special fund for the purchase of railroad rights-of-way. The fund would be administered by the Department of Public Works, and the rights-of-way would be held in a land bank to be withdrawn for use for public purposes in the future as required.

The Authority concurs in this recommendation and proposes that the Commonwealth of Massachusetts establish such a fund in the amount of \$150,000,000.

It should be noted that the Alternative Suburban Commuter Service Programs assume the existence and application of such a fund, and the cost estimates for the alternative programs do not include the cost of any railroad rights-of-way. If the proposed land bank fund does not materialize, the cost of the suburban commuter program alternatives would be increased to include the cost of buying or leasing rights-of-way.

The cost estimates for the proposed rapid transit extension projects, on the other hand, include the costs of rights-of-way, and should the fund be available for use, the individual project costs could be reduced.

CONTINUING STUDIES

Summary

Continuing studies underway include the feasibility of:

Extending the Blue Line to the Western Corridor by means of converting the Riverside Line to high platform rapid transit.

Extending the Blue Line north to the Pines River to permit a direct interception of automobile traffic from Interstate 95 now under construction.

Extending rail transit service to Needham via Cook's Junction.

The Central Area Systems Study is determining ways of improving the quality and efficiency of Green Line service in the Central Subway.

The process of designing and instituting feeder bus improvements continues with the objective of more fully integrating the bus service within the Authority's district.

Relationships with private carriers are constantly reassessed to assure that private carriers are used effectively and that the acquisition is accomplished smoothly when and if necessary to meet Federal and State statutory requirements.

Although extensively committed to existing technologies because of the heavy investment in existing facilities, the Authority is maintaining a constant awareness of the emerging new techniques of mass transit for possible application in the Boston area.

Feasibility Studies for Additional Rapid Transit Lines

Two Corridors (Western and Northeast) did not have any rapid transit extension projects included in the 1966 Program for Mass Transportation.

The *Recommended Highway and Transit Plan* of the Eastern Massachusetts Regional Planning Project recommends consideration be given to extending Blue Line rapid transit service from the North Shore to the proposed middle circumferential highway in the vicinity of the Wellesley-Natick line via a high platform rapid transit line along the Highland Branch, or as an alternative, along the Penn Central Railroad's Boston and Albany right-of-way.

Such a project would require conversion of the Riverside Line to high level platforms, would provide better downtown distribution for both lines, and would provide the Airport with direct service from the western suburbs.

Although provision of rail transit service to Needham is being proposed as a part of the Southwest Corridor Project, via the Needham Branch of the Penn Central, the study of providing rail transit service to Needham via Cook's Junction is being included in the Western Corridor Analysis as an alternative to the proposed Orange Line Needham Branch.

The Eastern Massachusetts Regional Planning Project's *Recommended Highway and Transit Plan* also recommends early construction of a one-mile extension from the present Blue Line terminal at Wonderland to the vicinity of Route 107 at the Pines River in Revere, with a major parking lot and access ramps to Route 107 and Interstate 95.

The study of Blue Line improvements also include examining the possibility of:

Construction of an express transit track from Pines River to Airport Station in the median of the proposed Northeast Expressway, which would be needed to serve the proposed third Harbor Crossing.

A transit lines from the vicinity of the present Airport Station into the Logan Airport Terminal area.

Feasibility studies of all the above described projects are now underway. They are financed as part of the Central Area Systems Study, described in the following section.

Central Area Systems Study

The Authority operates six streetcar lines, five of which use the Central Subway, using 343 PCC type streetcars. The routes using the Central Subway are Watertown, Commonwealth Avenue, Beacon Street, Riverside and Huntington Avenue. The sixth PCC route is the Ashmont-Mattapan line.

The 1966 Approved Program stressed the need for better downtown transit distribution:

“...it appears at present that considerable effort will be needed in the regional center in and near downtown Boston and Cambridge to provide better downtown transit distribution and meet the potential demands for service in future years as well as to remove the remaining Green Line elevated structure on Causeway Street at North Station. While the strain on capacity on most lines will be a general problem, there will be the specific problem of determining the best way to renew the extremely valuable, but now obsolete and costly-to-operate Green Line streetcar subway-and-surface system. There is the specific problem of seeking to relieve the operating losses on East Boston's Blue Line, providing better downtown distribution for the Blue Line, and make the Airport service more attractive and directly accessible to more transit riders.”

The Central Area Systems Study Project, or CASS, is now underway, addressing itself to these questions.

By far the most serious existing problem in the downtown area occurs on the Green Line, the subway portion of which is known as the "Central Subway." The CASS project therefore is concentrating on the Green Line, which carries approximately 250,000 passengers per day, the highest of any of the downtown subways, and which is the least well-equipped of the downtown subway lines to handle this volume of traffic.

The scope of the CASS Study is sufficiently broad so that a large number of alternatives, including the possibility of converting the Green Line to high level platform, can be reviewed.

The budget for the CASS project is \$2,000,000.

Feeder Bus System Improvements

At the time of the approval of the 1966 Program, the Authority operated 129 feeder bus lines in 14 cities and towns with a fleet of 800 buses. Through the acquisition of the Eastern Massachusetts Street Railway Company, this has been increased to 230 routes in 49 cities and towns within the Authority's district and four outside the district, and the Authority's bus fleet has been increased to 1,143.

In the past year, the Authority's attention has been directed to integrating the former Eastern Massachusetts Street Railway Company's routes with the other Authority routes, and with developing feeder bus routings to support the program for suburban commuter service to be selected for implementation from among the three alternative programs that have been submitted to the Advisory Board.

The development of a comprehensive feeder bus system for the Authority's district continues. An important input to the study will be the selection and implementation of one of the alternative suburban commuter service programs.

Coordination and Integration of Private Carriers

The Authority's policy with respect to private carriers was stated as follows in the 1966 approved Program:

While a direct approach for the Authority could be to acquire all the non-Authority urban and suburban bus and rail commuter services, the policy is to encourage private firms to remain in business as long as it is economically justified and in the best interests of the taxpayers and the traveling public."

This remains the Authority's policy.

Proposals with respect to both railroads and bus suburban commuter service have been advanced in the three alternative suburban commuter service programs. Relations with specific private carriers will depend largely on which of those alternatives or modifications thereof is selected for implementation.

Since the 1966 Program was developed the Authority found it necessary, as it expanded its own rapid transit lines into territory previously serviced by the Eastern Massachusetts Street Railway Company, to acquire the assets of that company in order to assure both labor and private management of equitable treatment under the provisions of both State and Federal law.

It is anticipated that, in order to comply with statutory requirements, further acquisitions will be necessary as the transit development program is implemented.

It is proposed therefore that funds set aside for the purposes of acquiring private carrier assets, including the \$6,700,000. expended to the Eastern Massachusetts Street Railway Company be established at \$11,700,000.

Consideration of Other Vehicle Systems

Major improvements in public transportation equipment have evolved in recent years. These developments demand a continual reassessment of the Authority's present and future physical facilities (rolling stock, rights-of-way, system design, and system philosophy). The necessity for keeping abreast of transit innovations, new equipment and concepts as well as their applicability, availability, and adaptability to the problems of the region cannot be overstressed.

The Authority recognizes the importance of maintaining an awareness of these transit innovations and of being responsive to the implications they present. However, no new system can hope to offer a "cure all" solution for commuter and other transportation problems. Almost without exception, all of the vehicular systems investigated with one exception (the Starrcar) provide essentially the same functions of transportation from fixed locations, usually along fixed routes, to other fixed locations, according to a predictable schedule. Since it is virtually certain that some of the improvements surveyed will be implemented in the near future, the Authority recognizes that it has a duty to continually appraise all these devices objectively with regard to the requirements of its own system.

Changing travel patterns and land uses within the Metropolitan Core and at its extremities tend to push fixed lines into obsolescence, under-utilization, or misalignment in relation to new population concentrations. These developments force the consideration of new methods, new concepts, new equipment to better serve the present and prospective transit traffic. However, it must also be recognized that complete abandonment of subways is economically unfeasible because of the extensive investment in a transit network already in place. For this reason, Boston's choice of transit systems is limited to those that are evolutionary.

Keeping this restriction in mind, the Authority has conducted a survey of and has evaluated currently available and proposed mass transportation technological advances. These fall into several categories:

Urban and suburban bus systems.

Downtown distribution systems.

Small-car transit systems.

Evolutionary improvements in conventional mass transit systems and in railroad commuter equipment.

All of the above systems are described in the Staff Supplementary Report.

CAPITAL FUNDING REQUIREMENTS

The foregoing set of proposed capital projects results in a total estimated cost, in 1969 dollars, of \$882,300,000. Adding a factor for an estimated inflation of 6% per year, the total capital needs are estimated to be \$998,700,000 assuming completion of the total program by 1975. Any delay in project starts or stretch-out in construction beyond that year would increase the total capital needs.

Capital Budget

In capital budgeting terms, itemizing the proposed work into capital projects, the capital funding requirements are as follows:

Number	Capital Project Name	January 1969 Estimated Cost in Millions
10	Construction Administration (1)	\$17.2
11	Haymarket-North	166.5
14	South Shore	111.6
15	Yards and Shops	22.5
16	Mattapan Extension	14.5
17	Central Area Systems Study	2.0
20	Improvements to Existing Plant	26.2
22	Harvard-Alewife	157.3
25	Southwest Corridor	201.9
29	Station Modernization	60.2
30	Revenue Equipment	63.7
31	Acquisition of Private Carrier Assets	11.7
32	Service Contracts	5.0
33	Non-Revenue Equipment	2.8
50	Office Furniture and Office Equipment	0.6
-	Suburban Commuter Service Program	18.6
	Sub-Total	\$882.3
	Contingency for Inflation	116.4
	Program Total	\$998.7

- (1) *Consists of salaries and expenses for general capital program administration; feasibility, planning and engineering studies for overall expansion program; research and development studies; joint studies with other agencies and related capital program administrative items.*

Construction Schedules

The inflation contingency is calculated on the following drawdown schedule:

Fiscal Year	Estimated Cost in Millions		
	Base	Inflation	Total
1966 - 68	\$133.3	-	\$133.3
1969	100.3	-	100.3
1970	146.8	\$8.8	155.6
1971	134.6	16.2	150.8
1972	111.3	20.0	131.3
1973	136.4	32.7	169.1
1974	73.9	22.2	96.1
1975	45.7	16.5	62.2
TOTAL	\$882.3	\$116.4	\$998.7

Outlook for Federal Transit Funds

The Urban Mass Transportation Act of 1964, as amended, authorizes Federal Grants to assist local transit capital improvement projects on a matching basis of two-thirds Federal and one-third Local. The amount authorized through June 30, 1970 is \$865,000,000. The statutory limitation for any one state is one-eighth of the total authorization, resulting in a \$108,000,000. maximum possible amount for Massachusetts until mid-1970.

As of this date, the Authority has received \$57,400,000 in Federal aid for four capital projects. It has made final application for \$51 million to support a fifth project. Approval of this application will use the remaining maximum funds available for Massachusetts through the Fiscal Year 1970.

The approved projects are the Station Modernization Program; an \$18,000,000 phase of the Haymarket-North Extension (Haymarket-Charlestown Tunnel); the first 150 buses of the Bus Replacement Program; and the construction of the South Shore Extension, including the acquisition of the Eastern Massachusetts Street Railway Company. All of these projects have received two-thirds Federal Aid Grants since, on October 9, 1968, the Authority became eligible for the full two-thirds funding of capital grants as a result of meeting the Federal requirements for comprehensive planning.

The outlook for Federal appropriation beyond June 1970 must be evaluated as it is essential to determining the amount of likely future funds available for the programs. The outlook for Federal funds after mid-1970 is encouraging, but the Authority must have available sufficient local funds to match Federal grants. Federal legislative actions indicate a continuing Federal Aid Transit Program, and the Authority would be unwise not to schedule its activity accordingly.

The funding schedule has assumed that the total level of appropriations of \$175 to \$200 million will be continued during the next several years and that the Authority can reasonably expect to receive approximately \$25 million.

On this basis it is assumed that an additional \$100,000,000 in Federal funds will be available through Fiscal Year 1975, for a total Federal contribution of \$208,400,000.

Additional State Bonding Authorization Required

It can be seen from the foregoing that, if the proposed capital program is to be accomplished by 1975, additional state funding requirements are as follows:

		Millions
Total Estimated Cost of Program		\$998.7
Present Bonding Authorization		225.0
		\$773.7
Federal Transit Aid Anticipated		208.4
		\$565.3
Other Income		
Charlestown renewal assistance	\$12.0	
Sale of Bennett-Eliot yard	7.4	
Community costs reimbursed:		
Boston Redevelopment Authority	2.3	
South Shore	4.0	25.7
Additional Funding Required		\$539.6

Proposed Source of Funding

Of the estimated bonding authorization of \$540,000,000, it is proposed to have \$375,000,000 State assisted and \$165,000,000 to be borne by the Authority as part of its Annual Current Expenses. This is generally in the same ratio as the Authority's present bonding authorization of \$225,000,000 of which \$145,000,000 is eligible for State assistance and \$80,000,000 to be borne by the Authority. Local Service debt would be assisted 50% and Express Service debt would continue at 90%.

The schedule on the following page is the Tentative Funding Schedule on Summary by Federal Fiscal Years (July 1 - June 30) which allocates all proposed sources of funds.

The legislative program proposed by the Authority would raise sufficient funds to underwrite the State share of \$375,000,000 by increasing the motor vehicle excise tax in the Authority area. This increase of \$8 per thousand would be effective January 1, 1971, an additional \$4 in 1972, and an additional \$3 in 1973. This plan would yield the necessary tax revenue of \$22 and one-half million annually beginning in 1976.

The Authority also submits two other alternatives, namely a state-wide increase in the motor vehicle excise tax, which would be approximately one-half the rate increase proposed in the Authority's legislative program and increases in the tax on cigarettes of 2 cents January 1, 1972 and an additional 1½ cents on January 1, 1974.

TENTATIVE FUNDING SCHEDULE IN SUMMARY

MILLIONS OF DOLLARS BY FISCAL YEARS

<u>Source</u>	<u>Total</u>	<u>FY 66 - 68</u>	<u>FY 69</u>	<u>FY 70</u>	<u>FY 71</u>	<u>FY 72</u>	<u>FY 73</u>	<u>FY 74</u>	<u>FY 75</u>
90% State	\$492.7	\$31.8	\$64.9	\$106.5	\$73.8	\$71.5	\$97.1	\$34.7	\$12.4
50% State	27.3	3.8	5.8	4.9	6.4	1.8	1.8	1.9	.9
Non - State	244.6	29.6	21.9	21.1	35.4	33.0	45.2	34.5	23.9
Federal	208.4	57.0	.5	15.7	35.2	25.0	25.0	25.0	25.0
Other	<u>25.7</u>	<u>12.0</u>	<u>6.3</u>	<u>7.4</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
TOTAL	\$998.7	\$133.3	\$100.3	\$155.6	\$150.8	\$131.3	\$169.1	\$96.1	\$62.2

Notes:

1. The proposed legislation would increase the total amount from \$145 million in bonds to \$520 million for which 90% or 50% State Aid is available, depending on purpose and would increase the total amount from \$80 million in bonds to \$245 million for the Authority's share for projects for which no State Aid is authorized or a grand total of \$765 million.
2. "Federal" refers to Federal Transit Aid only.
3. "Other" refers to Federal urban renewal funds (\$12 million), Sale of Bennett-Eliot Yard (\$7.4 million), community costs reimbursed (\$4 million) and Boston Redevelopment Authority (\$2.3 million).

RAPID TRANSIT EXTENSIONS CONSTRUCTION SCHEDULE

Under this Revised Program, the construction schedule of the rapid transit extensions is estimated as follows:

Project	Start	Complete
South Shore	1966	1971
Mattapan	1969	1971
Haymarket-North	1967	1973
Southwest Corridor	1968	1975
Harvard-Alewife	1971	1975

PROPOSED LEGISLATIVE PROGRAM

A draft of suggested legislation which, if enacted, would permit the accomplishment of this Revised Program for Mass Transportation is attached.

Commentary on Proposed M.B.T.A. Legislation

Section 1 provides for an additional motor vehicle excise tax to increase the amount available for state transportation aid to the Authority and other carriers. The tax would apply only in the M.B.T.A. area and would begin in 1971 at \$8 per thousand. It would increase to \$12 in 1972 and \$15 in 1973. Unlike gas taxes and registration fees, the motor vehicle excise is not earmarked by the constitution for the highway fund. Nevertheless, since the Supreme Judicial Court has not determined the constitutionality of an area tax, the bill should be submitted to the court for an advisory opinion before it is adopted.

The appendix to the commentary contains possible alternative taxes.

Section 2, defines "limited rail-bus service" for which a special method of apportionment is provided in Section 3. The same definition would work for any of the three suburban Commuter Plans (A, B, and C) although the rail portion of the definition would have no significance after the current year in the event the all-bus plan (Plan B) is adopted.

Section 3 continues in force the present apportionment formula for railroad service and makes it applicable to "limited rail-bus service" as defined in Section 2.

Section 4 clarifies the purposes for which bonds may be issued and permits rolling stock to be acquired and reconditioned from the proceeds of state-aided bonds. Even if the all-bus plan is adopted, this section would be a desirable clarification and simplification.

Section 5 restates the limit on the bonds which the Authority may issue. The present limit is \$225,000,000 in all. The proposed limit is \$765,000,000, an increase of \$540,000,000.

Section 6 increases the maximum principal amount of state bond aid from \$145,000,000 to \$520,000,000, an increase of \$375,000,000. This increase in state aid necessitates an increase in taxes as provided in Section 1.

Section 7 authorizes state-aided bonds to mature on a level debt service basis (similar to the usual home mortgage) or, in the alternative, in accordance with a more rapid amortization schedule, such as equal annual installments of principal as used by the Authority in the past. Even with the increased taxes provided by Section 1, it may be necessary to shift to a level debt service schedule on future state-aided bonds in order to fit the debt service within the available tax revenues. The present law also provides for level debt service, but not adequately. In effect, the present law requires

the maturity schedule to be computed on the basis of the actual interest rates even though the rates cannot be established until after the bonds are sold. The proposed Section 7 would permit the use of estimated rates and would also permit reasonable rounding off.

Section 8 authorizes state aid for the interest on bond anticipation notes to the same extent as on bonds.

Section 9 extends state aid for the railroad operating subsidy from July 31, 1969, to the end of the year and provides an additional \$1,350,000 for this purpose. This is sufficient for the B & M only, it being the intention of the Authority to discontinue the New Haven subsidy on July 31.

Section 10 authorizes the Commonwealth to issue \$150,000,000 bonds for the purpose of acquiring railroad rights-of-way as a 'land bank.' These rights-of-way would later be made available for highway or public transportation purposes as needed.

General. The proposed legislation requires a 2/3 vote in each branch of the General Court. Also, since it provides for additional taxes, it is a money bill and should originate in the House.

APPENDIX TO COMMENTARY

The following are alternates to Section 1 of the bill. Alternate 1 applies the increased motor vehicle tax on a state-wide rather than an area basis and cuts the rate in half. Alternate 2 substitutes an increase in the cigarette tax amounting to two cents in 1972 and 1973 and three and one-half cents thereafter.

(Alt. 1) SECTION 1 (a). Chapter sixty A of the general laws is amended by inserting the following section immediately after section one: Section 1A. In addition to the excise imposed by section one, there shall be assessed and levied on every motor vehicle and trailer registered under chapter ninety, for the privilege of such registration, an excise measured by the value thereof, as defined and determined in accordance with this chapter, at the rate of four dollars per thousand of valuation for nineteen hundred seventy-one, six dollars per thousand for nineteen hundred seventy-two, and seven and one-half dollars per thousand for nineteen hundred seventy-three and each calendar year thereafter. All provisions of this chapter relative to the assessment, collection, payment, abatement, verification and administration of the excise imposed by section one, including exemptions and penalties,

shall, so far as pertinent, be applicable to the excise imposed by this section. The excise imposed by this section, including sums received as penalties, forfeitures, interest, costs of suits and fines attributable thereto, shall be credited to the General Fund and used solely toward meeting the requirements of section twenty-five B of chapter fifty-eight; provided that there shall be deducted therefrom expenditures for abatements or refunds attributable to such excise, including interest or costs paid on account of such abatements or refunds, but excluding rebates under subparagraph (b) of section twenty-five B of chapter fifty-eight. Receipts by the commonwealth under this section shall be so credited as received. Receipts by the cities and towns during each calendar year, less the deductions prescribed above, shall be paid to the commonwealth on or before the first day of April of the following year and thereupon credited as provided above. At the time of making said payment, the treasurer of each city or town shall file a report with the commissioner on a form prescribed by him showing the computation of the amount paid.

(b) Section twenty-five B of chapter fifty-eight of the general laws is amended by changing the portion prior to subparagraph (a) to read as follows:

Section 25B. The state tax commission shall, as hereinafter provided, certify to the state treasurer for payment, from that portion of the proceeds of the excise on cigarettes as authorized by paragraph (b) of section twenty-eight of chapter sixty-four C and from the proceeds of the additional excise on motor vehicles and trailers as authorized by section one A of chapter sixty A, the following:-

(Alt. 2) SECTION 1 (a). Chapter sixty-four C of the general laws is amended by inserting the following section immediately after section six: Section 6A. In addition to the excise imposed by section six, there shall be assessed and levied an excise of one mill per cigarette sold, imported or acquired (as the case may be) in nineteen hundred seventy-two and seventy-three and one and three-quarters mills in nineteen hundred seventy-four and each calendar year thereafter. All provisions of this chapter relative to the assessment, collection, payment, abatement, verification, disposition and administration of taxes, including reports and penalties, shall, so far as pertinent, be applicable to the excise imposed by this section.

(b) Every manufacturer, wholesaler, vending machine operator, unclassified acquirer, transportation company and retailer as defined in section one of said chapter sixty-four C, who

on January first, nineteen hundred seventy-two or seventy-four has any cigarettes on hand for sale shall make and file with the commissioner of corporations and taxation within twenty days thereafter a return subscribed under penalties of perjury showing a complete inventory of such cigarettes and shall, at the time he is required to file such return, pay an additional excise at the rate of one mill per cigarette in nineteen hundred seventy-two and three quarters of one mill per cigarette in nineteen hundred seventy-four on all cigarettes upon which such additional excise has not previously been paid. All provisions of chapter sixty-four C relative to the assessment, collection, payment, abatement, verification, disposition and administration of taxes, including penalties, shall, so far as pertinent, be applicable to the excise imposed by this section.

(c) Paragraph (b) of section twenty-eight of said chapter sixty-four C is amended by striking the language prior to the semi-colon and substituting the following: "One mill of the excise imposed by section six and the full excise imposed by section six A and a proportionate amount of all sums received as penalties, forfeitures, interest, costs of suits and fines shall be credited to the General Fund and used solely toward meeting the requirements of section twenty-five B of chapter fifty-eight".

AN ACT AMENDING THE LAW ESTABLISHING THE MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY, PROVIDING FOR THE PURCHASE
OF RAILROAD RIGHTS OF WAY BY THE COMMONWEALTH AND
AUTHORIZING ADDITIONAL TAXES FOR TRANSPORTATION
PURPOSES.

Be it enacted, etc., as follows:

SECTION 1 (a). Chapter sixty A of the general laws is amended by inserting the following section immediately after section one: Section 1A. In addition to the excise imposed by section one, there shall be assessed and levied on every motor vehicle and trailer registered under chapter ninety which is subject to local assessment under this chapter by a city or town within the area of the Massachusetts Bay Transportation Authority, an excise for the privilege of such registration measured by the value thereof, as defined and determined in accordance with this chapter, at the rate of eight dollars per thousand of valuation for nineteen hundred seventy-one, twelve dollars per thousand for nineteen hundred seventy-two, and fifteen dollars per thousand for nineteen hundred seventy-three and each calendar year thereafter. All provisions of this chapter relative to the assessment, collection, payment, abatement, verification and administration of the excise imposed by section one, including exemptions and penalties, shall, so far as pertinent, be applicable to the excise imposed by this section. The excise imposed by this section, including sums received as penalties, forfeitures, interest, costs of suits and fines attributable thereto, shall be credited to the General Fund and used solely toward meeting the requirements of section

twenty-five B of chapter fifty-eight; provided that there shall be deducted therefrom expenditures for abatements or refunds attributable to such excise, including interest or costs paid on account of such abatements or refunds, but excluding rebates under subparagraph (b) of section twenty-five B of chapter fifty-eight. Receipts by the cities and towns during each calendar year, less the deductions prescribed above, shall be paid to the commonwealth on or before the first day of April of the following year and thereupon credited as provided above. At the time of making said payment, the treasurer of each city or town shall file a report with the commissioner on a form prescribed by him showing the computation of the amount paid.

(b) Section twenty-five B of chapter fifty-eight of the general laws is amended by changing the portion prior to subparagraph (a) to read as follows:

Section 25B. The state tax commission shall, as hereinafter provided, certify to the state treasurer for payment, from that portion of the proceeds of the excise on cigarettes as authorized by paragraph (b) of section twenty-eight of chapter sixty-four C and from the proceeds of the additional excise on motor vehicles and trailers as authorized by section one A chapter sixty A, the following:-

SECTION 2. Section one of chapter one hundred sixty-one A of the general laws is amended by inserting the following definition immediately after the definition of "express service": "Limited rail-bus service", commuter railroad passenger service and service on any bus line which runs in the aggregate for more than six miles on limited access highways or expressways (toll or free) or as express service as defined above, including any local service portion of any such bus line.

SECTION 3 (a). Section eight A of said chapter one hundred sixty-one A is amended to read as follows: Section 8A. Notwithstanding any contrary provision of law, the net cost, after applicable state aid, of limited rail-bus service shall be apportioned as follows:

Twenty-five percent thereof shall be assessed upon all cities and towns comprising the authority's territory in the proportion which the number of commuters in each said city or town bears to the total number of commuters in all of said cities or towns. The number of commuters, as defined in section one, shall be determined in accordance with the latest decennial census made by the United States Department of Commerce. If said census does not provide the necessary data for determining the number of commuters, the authority shall determine the number of commuters by some accurate and otherwise appropriate method.

The remaining seventy-five percent shall be assessed upon each such city or town in proportion to the respective number of residents of such city or town boarding within the area constituting the authority during the applicable period on limited rail-bus service operated by or under contract with the authority; provided, however, that the number of riders boarding at the North Station, the South Station and the Back Bay Station in the city of Boston and outbound bus riders boarding in Boston shall not be included for the purpose of determining such assessments. The number of residents of each city or town boarding on limited rail-bus service shall be determined by the authority on the basis of such samples, surveys and other counts and estimates as the authority deems reasonable and practicable. For the purposes of this paragraph, those boarders who are non-residents of the area constituting the authority shall be counted as residents of the city or town in which they board.

The income and expense included in the computation of the net cost of limited rail-bus service under this section shall be excluded from the computation of the net costs or net savings of express and local service, but debt service on bonds issued under clause (2) of section twenty-three shall be included in the net cost of express service to be assessed under section eight of said chapter.

(b) This section shall be applicable to service provided during the current fiscal period and thereafter and shall supersede section two of chapter seven hundred twenty-eight of the acts of nineteen hundred and sixty-eight.

SECTION 4 (a). Clause (1) of the first paragraph of section twenty-three of said chapter one hundred sixty-one A is amended to read as follows: (1) To acquire, plan, design, construct, reconstruct, alter, recondition and improve mass transportation facilities and equipment for express service for use by or under contract with the authority.

(b) Clause (3) of the first paragraph of said section twenty-three is amended to read as follows: (3) (a) To acquire, plan, design, construct, reconstruct, alter, recondition and improve mass transportation facilities and equipment for local service for use by or under contract with the authority and (b) to provide relief to any private company, whether by agreement or arbitration award, under the provisions of section fourteen;

(c) Clause (4) of the first paragraph of said section twenty-three is amended to read as follows: (4) To pay any capital costs of the authority, whether or not bonds for any such purpose may also be issued under any other provision of this section.

SECTION 5. The third paragraph of said section twenty-three is amended to read as follows: Not more than seven hundred sixty-five million dollars of bonds shall be issued by the authority under clauses (1), (2), (3) and (4) above, including not more than five million dollars of bonds under clause (2).

SECTION 6. Section twenty-eight of said chapter one hundred sixty-one A is amended by changing the amount stated in clause (A) thereof from "one hundred and forty-five million dollars" to "five hundred twenty million dollars."

SECTION 7. Said section twenty-eight is further amended by changing the second paragraph to read as follows: Any debt service on bonds issued by the authority, for which contract assistance is provided, shall mature serially beginning not later than ten years after the date of issue and ending not later than forty years after the date of the bonds, so that the amounts payable in the several years for principal and interest combined shall be as nearly equal as in the opinion of the authority it is practicable to make them or, in the alternative, in accordance with a schedule providing a more rapid amortization of principal.

SECTION 8. Said section twenty-eight is further amended by adding the following paragraph at the end: Pursuant to any such contract, the executive office may also provide for financial assistance by the commonwealth to the authority with respect to interest on bond anticipation notes, provided that the bonds anticipated are eligible as to purpose and amount for contract assistance under clause (A) above and provided further that the percentage limitations applicable to the bonds under clause (A) shall also apply to the notes. Notwithstanding any contrary provision of this chapter, an amount paid by the commonwealth under this paragraph shall not be assessed on the cities and towns and shall not be treated as part of the net cost of service or of the amount payable by the commonwealth under section twelve.

SECTION 9. Section one of chapter seven hundred twenty-eight of the acts of nineteen hundred sixty-eight is amended by changing "four million one hundred forty thousand dollars" in lines four and five to "five million four hundred ninety thousand dollars" and by changing "July" in line seven to "December".

SECTION 10 (a). The department of public works, with the approval of the governor, is authorized on behalf of the commonwealth to acquire such railroad rights of way in the

commonwealth as it deems necessary to provide for the foreseeable highway and public transportation needs of the commonwealth within the ten years following the passage of this act. Such acquisition may be in fee or otherwise, may be accomplished by eminent domain under chapter seventy-nine or eightyA or by purchase or otherwise, and may include outstanding interests not owned by the railroad involved, subject to the limitations of subparagraph (o) of section three of said chapter one hundred sixty-one A in the case of land devoted to another public use. Rights of way so acquired shall be in the custody of the department until leased or transferred. Pending their use for highway or public transportation purposes, the department may lease such rights of way, with the approval of the governor, on such terms as shall be deemed most advantageous to the commonwealth. During the term of any such lease, the property shall be exempt from betterments and special assessments but shall be subject to local property taxes, sewer and water use charges and the like in the same manner and to the same extent as if the lessee were the owner. Payment shall not be enforced by any lien upon or sale of the property and only the leasehold interest may be sold in the manner provided by law for selling real estate for nonpayment of such taxes or other charges. When the department determines that a right of way acquired under this section, or a portion thereof, is needed by itself for highway







purposes or by the Massachusetts Bay Transportation Authority or another public agency for public transportation purposes and that such use of the property is consistent with the transportation needs of the commonwealth as a whole and with such plans and programs as shall have been adopted under section three A of chapter sixteen of the general laws, the department may, with the approval of the governor, utilize the property for highway purposes or convey the property without consideration to such authority or other agency, as the case may be.

(b) To meet the cost of acquisitions under this section, the state treasurer shall, upon request of the governor, issue and sell at public or private sale bonds of the commonwealth, registered or with interest coupons attached, as he may deem best, to an amount to be specified by the governor from time to time, but not exceeding, in the aggregate, the sum of one hundred and fifty million dollars. All bonds issued by the commonwealth, as aforesaid, shall be designated on their face Land Acquisition Loan, Act of 1969, and shall be on the serial payment plan for such maximum term of years, not exceeding thirty years, as the governor may recommend to the general court pursuant to Section three of Article LXII of the Amendments to the Constitution of the Commonwealth, the maturities thereof to be so arranged that

the amounts payable in the several years of the period of amortization, other than the final year, shall be as nearly equal as in the opinion of the state treasurer it is practicable to make them. Said bonds shall bear interest semiannually at such rate as the state treasurer, with the approval of the governor, shall fix. The initial maturities of such bonds shall be payable not later than one year from the date of issue thereof and the entire issue not later than June thirtieth, two thousand and nine.



Key:

-  Existing Rapid Transit  Boundary of T Area
 Existing Facility To Be Upgraded
 New Rapid Transit
 Expressways, Existing & Programmed
 Not Shown: Existing and Future Bus Network
 Existing and Future Railroad Service

TLO
MBTA Mass. Bay Trans. Auth.

Tl
MBTA Revised Program for Mass Trans-
Revi portation. Jan. 1969.
Jan.

DATE

ISSUED TO

